

## Risk Stratification and Mortality Prediction of Hospitalised COVID 19 Patients

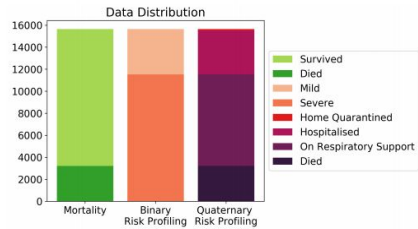
### INDIAN COHORT

#### Abstract

We Developed Machine learning based Risk Stratification and Mortality Prediction models for better allocation of medical resources for Indian COVID-19 patients.

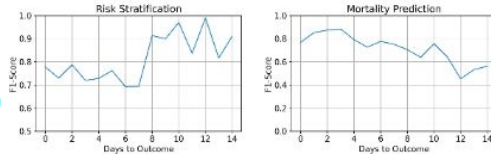
#### Dataset

Clinical Data of 544 COVID-19 patients was provided by Max Hospital, Delhi. The data collected contains 357 distinct parameters that include vitals, symptoms, comorbid conditions, lab reports along with the medicines administered.

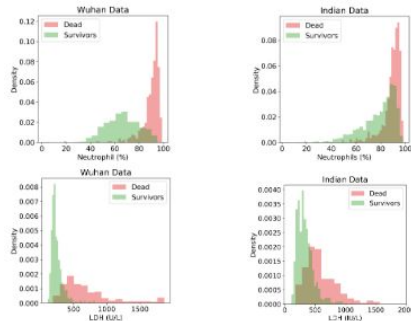


#### Results

Average and Day wise F1 scores are reported  
Risk Stratification: **0.81**      Mortality Prediction: **0.71**



#### Indian vs Wuhan Cohorts

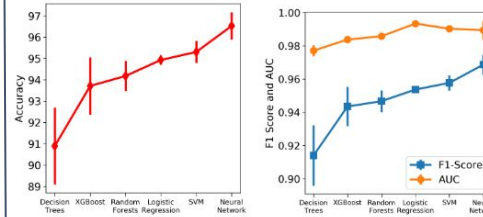


### WUHAN COHORT

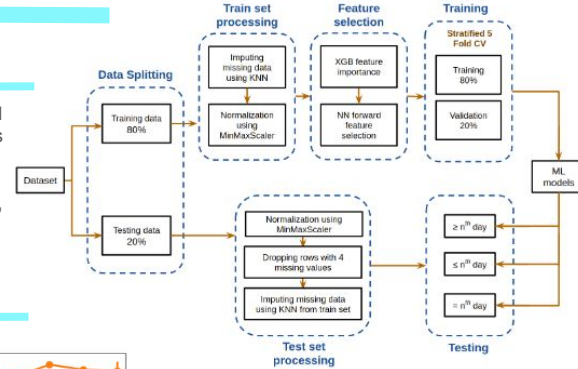
#### Abstract

We developed machine learning based Mortality Prediction model which gives a 96% prediction accuracy using 5 clinical features which were Age, Neutrophil(%), Lymphocyte(%), Hs-CRP and LDH.

#### Model Comparison



Neural Network gave the best results with overall accuracy of 96.6%, AUC of 0.989 and F1 Score of 0.969.



#### Neural Network Performance

